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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,796	02/06/2004	Vijayen Veerasamy	014089-002580US	8456
20350	7590	03/29/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			PADGETT, MARIANNE L	
		ART UNIT	PAPER NUMBER	
		1762		

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/773,796	VEERASAMY ET AL.	
	Examiner	Art Unit	
	Marianne L. Padgett	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) . Responsive to communication(s) filed on 12/6/04 & 7/19/04.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 12-15 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 3-11 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/19/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

Art Unit: 1762

(1) Applicant's election without traverse of group III, method claims 3-11 in the reply filed on 12/6/04 (C.O.M. 12/1/04) is acknowledged.

(2) Applicant's IDS of 7/19/04 (C.O.M. 7/14/04) is made record, however all the foreign patent and literature references were said to have been supplied in SN 10/354,336, but on review of this file no references were found therein, hence these references were not/cannot be reviewed.

(3) It is noted in the 3x great grand parent case, 08/761,336, now PN 5,858,477, a restriction was made between the claims 1-16 (427/562) method and the claims 29-33 (250/424) method, where these claims are analogous or the same as claims 3-6 and 7-11, respectively, with the former elected. However, the claims finally allowed combine features of the original claims 29-33 with those of the original cases initial 1-16, thus consideration of (obviousness) double patenting for all these method claims is proper and appropriate.

(4) Claims 3-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Use of relative terms that lack clear metes and bounds in the claims, or in the specification or relevant cited prior art, is vague and indefinite. In claim 3, line 2, see "highly" describing "tetrahedral amorphous carbon," which may be found used in [0014-15], but is equated with "large" another relative term or with non-limiting examples of the embodiments, which do not constitute a definition. Also, it is "protective" against what?

In claim 7, "enhancing" is a relative term that will mean different things to different people, and exactly what is meant by this term is not explicitly set forth. One might assume that the claim "to promote...ionization and homogenize the ion beam" is intended to be the enhancement, but as this all takes place in the plasma before any ion beam is formed, it is in no clear way changing, i.e. enhancing, an

Art Unit: 1762

ion beam (IB). Forming one IB with properties characteristic or different than another IB, is different than enhancing an IB already formed.

In claim 4, “a rate higher than about...” is self-contradictory in that values lower than “10 Å per second” are included by “about”, but excluded by “higher than”. Use of alternative (or) phrasing avoids this problem.

In claim 9, while its not an actual formal problem (i.e. 112), applicants may wish to note that “the frequency of an alternating induction potential” has no necessary relationship to any limitations in claim 7, and that there will always exist some such frequency much less than any value used for the magnetic field rotation. Clear connection to the independent claims limitations is needed for this claim to provide a meaningful instead of inherent limitation.

Similarly in claim 10, while logic implies that the “capacitively coupled extraction grid” is used in the IB formation, this claim provides no actual necessitated relationship in the process, only assumptions due to its relative geometry with the magnetic field, but the grid extracts nothing in particular and need not be any where near the plasma, but still may be physically transverse and normal to the rotation axis.

(5) The disclosure is objected to because of the following informalities: on page 1, [0001], the related application information needs to be updated for the 4 issued patents.

Appropriate correction is required.

(6) The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 1762

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(7) Claims 3-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 5,858,477. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present broader

independent claims 3 and 7, encompass the narrower claims of the patent, noting that the deposition process of claim 3 may be found in patent claims 1, 13, 17, 18 and 20, where the magnetic media being made therein is one of the species of present claim 6, and the source material of this case's claim 5, corresponds to patent claims 19 and 23. While present claim 4 differs by claiming a value for deposition rate, the patent claims have limitations to values, such as impact energy, or to use of plasma energization or extraction grids, etc., which will inherently effect the deposition rate, hence it would have been obvious to one of ordinary skill that like processes would have been expected to produce like characteristic effects, with the deposition rate being optimized to produce the maximum value consistent with desired product properties and quality. The patent claims do not include the limitation that the deposit is amorphous, however the claimed sp³ C-C bonds is common to both sets of claims, with patent inclusive of amorphous, which would have been obvious to one of ordinary skill, since amorphous protective C deposits are typical protective coatings that are well known species of the more generic but limited sp³ C-C bonds group.

With respect to the ion beam/stream process of present claim 7, all the independent patent claims form an ion stream, with 1, 17 and 20 all claiming (capacitively) coupling with an extraction grid, where dependent claims 7-12 and 21-22 of the patent further dealing with presently claimed spaced relationships, inductive potential and magnetic fields rotated; and used as presently claimed, noting that claims 7-12 have cascading dependency. While the order in which the limitations are claimed varies, they create overlapping ranges of processes that may be considered obvious variations in each other.

The present claim 11 has a specific range of magnetic field rotational frequencies not claimed in the patent, however it would have been obvious to one of ordinary skill in the art to optimize values for the claimed rotating magnetic field of the patent for deposition of claimed materials, which would have been expected be inclusive of claimed ranges as like configurations to produce analogous ion streams are

Art Unit: 1762

employed. Note that the “homogenized” ion beam may be considered to be read on by the ions having substantially uniform weight in the patent claim 1, as the phrases appear to have equivalent meanings.

(8) Claims 3-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 5,858,477 in view of Rabalais et al (5,374,318).

Alternate to the above argued obviousness for deposition of sp³ C-C bond films with amorphous morphology, Rabalais et al, who discuss various forms of carbon deposits, noted as useful for optical coatings or protective films on magnetic recording media, etc. (col.1, lines 19-48), discuss various sp³ bond (tetrahedral) forms frequently called diamond-like or DLC, where amorphous is a predominate species thereof (col.2, lines 5-42 and col.20, lines 48-56). Ion beam deposition is discussed as one of the oldest techniques of depositing DLC films (col.3, lines 13-60), with the ion characteristics, such as energy, being important for DLC deposit (col.5, lines 10-58), specifying that ion beam deposited C-films are amorphous or quasi-amorphous (col.8, lines 3-34, esp. 30-34), hence given the Rabalais teachings and as discussed above, it would have been further obvious for a typical microstructure for IB deposited sp³ carbon bonded (DLC) films to have been amorphous.

(9) Claims 3 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rabalais et al (318).

As noted by the above discussion of Rabalais et al (318), ion beams may be formed by extracting ions from gas plasmas formed from hydrocarbon gases, may be employed to form amorphous diamond-like coatings, thus reading on the technique requiring “energizing ions to form a stream from the plasma...”. It is noted that magnetic fields are employed to select the mass of the ions desired to be used in the deposition. See col.9, lines 19-68; col.12, lines 20-40; col.13, line 54-col.14, line 40+; col.15, lines 25-53; col.16, line 29-26+ (advantages & disadvantages, note 3-5 Å /sec deposition rate for individual beam). The background discusses a variety of uses, (magnetic media and options, etc.) with substrate

Art Unit: 1762

materials disclosed on col.8, lines 67-68; col.18, line 55-col.19, line 22; col.24, lines 63-68+ and other uses discussed on col.26, line 49-col.27, line 30 including coating holes and apertures, use in integrated circuits.

- (10) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rabalais et al (318).

While Rabalais et al notes that their discussed ion beam technique only produces a deposition rate of 3-5 Å/s for an individual beam, thus differing from the claim of higher than about 10 Å/sec, they further teach that the deposition rate may be enhanced by use of multiple beams caused to simultaneously impinge on the deposition site (col.17, lines 12-21 and col.21, lines 43-68, esp. 58-61). Therefore, it would have been obvious to one of ordinary skill in the art to use the taught ion beams to increase, i.e. enhance, deposition rate as suggested or taught, such that for example, two beams of the taught 5 Å/s rate would have been expected to give 10 Å/s, thus reading on the claimed range as written.

- (11) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rabalais et al (318) as applied to claims 3-4 and 6 above, and further in view of Lewin et al (4,486,286) or Baldwin et al (5,616,179).

While Rabalais et al (318) teach use of hydrocarbon gases, they provide no specific examples, such as applicants' claim of acetylene, however Lewin et al who is also teaching DLC deposition from an ion gun (i.e. stream or beam) teach that while any hydrocarbon source gas may be used, that ones with higher C to H ratios, such as C₂H₂, are preferred (figure; abstract; col.1, lines 10-30; col.2, lines 10-40 and 55-61; col.3, line 29+; and claims 1-3, 8-10). Alternately, Baldwin likewise teaches amorphous DLC coating employing a remote plasma ion source to create ion beams that may employ hydrocarbons, such as acetylene (abstract, figures; col.3, line 58-col.4, line 23). Given either analogous teachings of Lewin et al or Baldwin et al, it would have been obvious to one of ordinary skill in the art, that suitable

Art Unit: 1762

hydrocarbon gases for Rabalais et al's generic hydrocarbon gases would have included C₂H₂, especially considering the teaching of using those with higher proportion of C to decrease H retention for improved film properties.

(12) Claims 3-6 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Baldwin et al.

In Baldwin et al, see process teachings as discussed above, and additionally note the col.1, line 50-col.2, line 17+ teachings on sp³ and amorphous characteristics of IB deposits; col.4, line 53-col.5, line 13 for deposition rate teaching for such films including values of 700 Å/min=11 2/3 Å/sec or maximum value of 2000 Å/min=33 1/3 Å/sec; col.5, lines 14-52+ and col.10, lines 12-18 discussions of protective, optical and electrical properties; and col.7, lines 4-11 for a wide variety of substrates including glass.

(13) Claims 3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewin et al, optionally considering Baldwin et al or Rabalais et al (318).

See the discussion of Lewin et al in section 11 above, additionally noting taught use for hard protective coatings for optical lenses (col.1, lines 23-30). While Lewin et al teach a deposition process very close to that of applicant's Fig. 3A, employing anode, cathode and grid arrangement that is essentially capacitively coupled, and a magnetic coil to influence the plasma that produces the C ion stream to deposit "diamond or diamond-like carbon film", they have no discussion on whether or not the deposits are amorphous. As DLC is generally accepted as inclusive of microstructures as claimed, it would have been obvious to one of ordinary skill in the art that Lewin et al's deposits would have been expected to include amorphous DLC coatings as typical of IB results and effective for taught purposes. Alternately, Rabalais et al or Baldwin et al, discussed above describe α-C deposits for DLC from analogous IB techniques, thus further providing usefulness and effectiveness of that microstructures, and expectation for its resultant production.

Art Unit: 1762

(14) With respect to the ion beam claims of 7-11, it is noted that Lewin et al lacks inductive ionization process, and that their magnetic coils are stationary. The quadrupole magnets in Rabalais et al (318) appear to be employed not on the plasma volume per se, but downstream, nor do they appear to teach any mobility for the magnetic field.

(15) Claims 3 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 13, 24-25 and 29 or claim 22 of U.S. Patent No. 6,827,977 B2 or 6,663,753 B2, respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other, because they are encompassed by the broad claims of the present case, claiming limitations in different orders and with paraphrasing that has overlapping scope. Note that whether or not sp³ bonding is mentioned (both 977 and 753 do recite sp³ C-C bonds at some point), that DLC material or coatings inherently or by definition comprises such bonds. Both cases' claims may use glass substrates and IB deposition, thus are encompassed by the presently claimed technique, although they are species thereof due to claims of further limitations. The (753) patent does not claim amorphous microstructure for its DLC coatings, however arguments as supplied in section 7 above also apply here, or the following alternate rejection.

Claims 3 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 22 of U.S. Patent No. 6,663,753 in view of Rabalais et al (318) as discussed in section 8 above.

(16) Claims 3 and 5-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4-6, 8, 13 and 17 of U.S. Patent No. 6,764,579 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because while claimed in different orders, the limitations of (579) are encompassed by the present applications claims.

Art Unit: 1762

(17) Claims 3 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 10 and 15 of U.S. Patent No. 6,416,816 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claims of (816) are again encompassed by the broader present claims, except for variation in scope and order, plus the patent does not specify the DLC deposits are amorphous, however arguments as supplied above in sections 7 and 15 for (477) or (753) are again appropriate, or the following alternative.

Claims 3 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 10 and 15 of U.S. Patent No. 6,416,816 B2 in view of Rabalais et al as discussed in section 8 above.

(18) Claim 4 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims (1-2, 13, 24-25 and 29) or (22) or (1, 4-6, 8, 13 and 17) or (1, 5, 7, 10 and 15) of U.S. Patent No. 6,827,977 B2 or 6,663,753 B2 or 6,764,579 B2 or 6,416,816 B2, respectively in view of Rabalais et al (318) or Baldwin et al. While none of these patents claim any values for deposition rate, they all employ ion beam deposition of claimed films, and it would have been obvious to deposit at practical rates as taught by or known in the art as taught for analogous processes by either Rabalais et al or Baldwin et al (discussed above), and thus effect the claimed process.

(19) Claims 3 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, 17-18, 24-26, and 28-30 of copending Application No. 10/359,298. Although the conflicting claims are not identical, they are not patentably distinct from each other because while paraphrased and including other limitations, the (298) application is encompassed by the broader present claims, except for not claiming that the DLC coating is amorphous. However, above arguments as in sections 7 and 15 again apply or the following alternative.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 3 and 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, 17-18, 24-26 and 28-30 of copending Application No. 10/359,298 in view of Rabalais et al as discussed in section 8 above.

This is a provisional obviousness-type double patenting rejection.

(20) Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al (5,556,501).

Collins et al (501) teach an inductively, coupled remote plasma to create a plasma (i.e. ionize), where ions are extracted therefrom and sent towards a substrate via capacitively coupling using a bias system, and where the system's effect may be called an ion beam, and magnetic enhancement techniques may be applied therewith. See the abstract; figures 1-3, 13-14; col.3, lines 42-57; col.4, lines 13-35+; col.5, lines 28-63; and claims. Note extraction grid of fig.3. The magnetic field may be created by permanent or electromagnetic arrangements, which create static magnetic fields orthogonal to the substrate or parallel for the axis of the induction coil, and control location and transport of the plasma components (col.5, lines 12-25; col.12, lines 17-44; col.15, line 25-col.17, line 39). Collins et al does not discuss actually moving this magnetic field that is enhancing the plasma during their taught process. However, on col.2, lines 23-36 in the background they do discuss stationary magnetic fields that effect plasma gradients, which cause non-uniformity in etching or deposition or film properties, where the lack of uniformity can be decreased by rotating the magnetic field created by either mechanical movement or changing parameter of electromagnets. Given these teachings, it would have been obvious to one of ordinary skill in the art that the non-uniformities discussed on col.2 for magnetic fields near a substrate would likewise be produced in the plasma at the ion extraction interface, thus creating potential non-uniform distributions at the substrate surface, which the patent teaches are to be avoided. Hence removing such lack of homogeneity by use of the known techniques of rotating such magnetic field would have been expected to further effect even or symmetrically controlled ion distributions in the process of

Art Unit: 1762

Collins et al (501). Note that this appears consistent with the teachings due to desired uniformity and since the magnetic field produced by the magnets remain a static one, even if movement of the devices creating the field means that it is no longer stationary. While these teaching do not provide any specific parameter for the rotation, it would have been obvious to one of ordinary skill in the art to determine rotation frequency required to produce desired uniformity by routine experimentation, where the values determined would have been expected to depend on dimensions of the plasma being treated and the like, since rotating at same frequencies of significantly different diameters of plasma areas will produce very different rates of movement.

(21) Other art of interest with teaching on plasma distribution control using magnetic field include Kadlec et al (5,234,560; abstract; col.4, lines 18-32) who causes movement of the magnetic field with respect to the plasma via moving the anode; and Arikado et al (4,878,995; fig.3& col.6, line 22+) or Licata et al (6,224,724 B1; abstract, etc.), who rotate the magnetic devices. These references may be considered cumulative to the above teachings of Collins et al concerning rotating magnetic fields to decrease non-uniformity in plasma. Robinson et al (2004/0188239H) also contains such teachings, but is not prior art.

Oechsner (5,156,703) is further of interest for a remote plasma process using magnetic fields to shape the resultant plasma jet (abstract; figures, esp. 6; col.6, line 62-col.7, line 13+; and col.8, lines 47-68+), but lacks movement of the magnetic field through the plasma.

(22) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks, can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Padgett/tgd

February 28, 2005

March 3/25/05



**MARIANNE PADGETT
PRIMARY EXAMINER**